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EXAMINER	
HARLEY, JASON A	
ART UNIT	**PAPER NUMBER**
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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/584,833	OHMURO ET AL.	
	Examiner	Art Unit	
	Jason Harley	2468	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

This communication is in response to the application filed on 8/30/10 in which claims 1-19 have been amended.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-10, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. 2004/0128128) in view of Ofek (U.S. 6,038,230).

As to claim 1, Wang an acoustic signal packet communicating method teaches in packet communication between a first communication apparatus including at least a transmitting unit and at least one second communication apparatus including at least a receiving unit, the acoustic signal packet communicating method comprising: in the transmitting unit (Wang, par 0003, 0070). The paragraph shows communication between mobile terminals in a packet network, the mobile terminals are shown to have transmitting and receiving unit.

Wang show a step of dividing an acoustic signal such as a voice or music signal into given time segments called frames to generate a frame acoustic signal, a step of generating acoustic signal corresponding data corresponding to the frame acoustic signal of each frame (Wang, abstract); and a step of containing the frame acoustic signal and the acoustic signal corresponding data in packets and transmitting the packets; in the receiving unit, a step of storing received packets in a receiving buffer (Wang,, abstract, par 0003, 0070). The abstract and paragraph the music signal partitioned into frames and the acoustic signal corresponding to digital packets.

Wang also show a step of specifying a frame number of a frame to be extracted; a loss detecting step of determining whether or not a packet containing a frame acoustic signal associated with the frame number of a frame to be extracted is stored in the receiving buffer when it is determined in the loss detecting step that a packet containing the frame acoustic signal associated with the frame number of the frame to be extracted is stored in the receiving buffer, an acoustic signal packet decoding step of extracting

the frame acoustic signal from the packet stored in the receiving buffer and providing the frame acoustic signal as a frame output signal (Wang, par 0011-0014, 0019, 0023, 0049, 0054, 0055, 0058). The paragraphs show loss detection and determining a frame number to be extracted is in a buffer, and decoding the frame to fill in the loss frame.

Wang disclose when a packet loss occurs, based on a determining in the loss detecting step that the packet containing the frame acoustic signal associated with the frame number of the frame to be extracted is not stored in the receiving buffer, a loss handling step of extracting acoustic signal corresponding data for the frame which is a lost frame, from a packet stored in the receiving buffer and generating a frame output acoustic signal by using the acoustic signal corresponding data, (Wang, par 0011-0014, 0019, 0022, 0068). The paragraphs show detecting audio signal associated with the frame, and according to what parts are missing in a frame data in the buffers are used to derive or compute the missing data parts by unpacking the signal into a bit stream indicative of audio signals.

Wang provide the step of concatenating frame output acoustic signals outputted from the acoustic signal packet decoding step or the loss handling step and outputting a concatenated frame output acoustic signal (par 0003, 0019, 0022). The paragraphs show unpacking the signal into a bit stream indicative of audio signal.

Wang also disclose in the receiving unit, if a packet loss occurs, obtaining acoustic signal corresponding data having the same frame number as that of a lost frame from the packet in the receiving buffer by using the delay amount control

information included in the packet (Wang, par 0022, 0054, 0058, 0065). The paragraph shows a receiver unit obtaining the same frame number as the lost frame.

Wang fails to provide the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet

Ofek show the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet (Ofek, fig 15, col 14, ln 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted.

As to claim 2, Wang and Ofek describe the acoustic signal packet communicating method according to claim 1, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second communication apparatus include both of the transmitting unit and the receiving unit, the acoustic signal packet communicating method further comprising: in a respective receiving unit, of the first communication apparatus or the at least one second communication apparatus both or one of a first determining step of determining a jitter state of a received packet and a second determining step of determining a loss state of a received packet (Wang, par 0003, 0004, 0008, 0068, 0070). The paragraph shows communication apparatuses in a packet network being able to receive acoustic signal for determining packet loss.

Wang show a step of using the result of the determination made in any of the determining steps to determine the number of packets to be stored in the receiving buffer as a targeted value of the number of stored packets par 0055. (Wang, fig 4, 13, par 0022, 0054, 0062, 0065, 0068). The paragraphs show determining the number of packets to be stored in a buffer and a receiving unit for setting a lag amount control information, and the delay amount having value smaller than or equal to the number of packets to be stored. It is also shown where are feed back to the playback device of the mobile terminal.

Wang fails to show in the transmitting unit in the same communication apparatus that includes the receiving unit, a step of setting the delay amount control information to a value smaller than or equal to the targeted value of the number of the stored packets.

In an analogous art Ofek show in the transmitting unit in the same communication apparatus that includes the receiving unit, a step of setting the delay amount control information to a value smaller than or equal to the targeted value of the number of the stored packets (Ofek, fig 15, col 14, ln 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted.

As to claim 3, Wang and Ofek conveys the acoustic signal packet communicating method according to claim 1, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second other communication apparatus includes both of the transmitting unit and the receiving unit, the acoustic signal packet communicating method further comprising, in a respective

receiving unit, of the first communication apparatus or the at least one second communication apparatus both or one of a first determination step of determining a jitter state of a received packet and a second determination step of determining a loss state of a received packet (Wang, par 0003, 0004, 0068, 0008). The paragraph shows communication apparatuses in a packet network being able to receive acoustic signal for determining packet loss.

Wang a step of using the result of the determination made in the determination step to determine the number of packets to be stored in the receiving buffer as a targeted value of the number of stored packets (par 0068, 0069)and the step of sending the targeted value of the number of stored packets to the transmitting unit in the same communication apparatus(Wang, par 0054, 0070); and in the transmitting unit in the same communication apparatus that includes the respective receiving unit, (Wang, par 0022, 0062, 0065, 0068, 0069). The paragraphs show determining the number of packets to be stored in a buffer and a receiving unit for setting a lag amount control information. Measuring the number of packets stored in the buffer is shown and the apparatus having the ability to switch to the transmitting unit to send the data is shown also.

Wang fails to show the step of containing the targeted value of the number of stored packets sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication

In an analogous art Ofek show the step of containing the targeted value of the number of stored packets sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication (Ofek, fig 15, col 1, ln 33-38, col 14 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted.

As to claim 4, Wang and Ofek describe the acoustic signal packet communicating method according to claim 1, wherein the fist communication apparatus including both of the transmitting unit and the receiving unit and the at least one second communication apparatus includes both of the transmitting unit and the receiving unit, the acoustic signal packet communicating method further comprising: in respective receiving unit of the first communication apparatus or the at least one second communication apparatus the step of measuring the number of packets stored in the receiving buffer as a remaining buffer amount(Wang, abstract, par 0003, 0004, 0008,

0054, 0070). Measuring the number of packets stored in the buffer is shown, and the communication apparatuses in a packet network being able to receive acoustic signal for determining packet loss.

Wang show and a step of sending the remaining buffer amount to the transmitting unit in the same communication apparatus; and in the transmitting unit in the same communication apparatus that includes the respective receiving unit (Wang, par 0003, 0054, 0065, 0068, 0069). The paragraph shows the buffer information is used to determine lag value to recover the loss in the packet transmission.

Wang fails to show the step of containing the remaining buffer amount sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication and transmitting the packet.

In an analogous art Ofek show the step of containing the remaining buffer amount sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication and transmitting the packet (Ofek, fig 15, col 1, ln 33-38, col 14 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.
At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted

As to claim 5, Wang illustrates an acoustic signal packet communicating method in communication between one communication apparatus including at least a transmitting unit and at least one second communication apparatus including at least a receiving unit, an acoustic signal packet transmitting method comprising in the transmitting unit, dividing an acoustic signal such as a voice or music signal into given time segments called frames to generate a frame acoustic signal; generating acoustic signal corresponding data corresponding to the frame acoustic signal from the frame acoustic signal (Wang, abstract, par 0003, 0070). The paragraph shows communication apparatuses in a packet network being able to receive acoustic signal. It is also shown where the music signal partitioned into frames and the acoustic signal corresponding to digital packets.

Wang show containing the frame acoustic signal and the acoustic signal corresponding data in packets and transmitting the packets (par 0003),
Wang fails to provide the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value

specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet

Ofek show the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet (Ofek, fig 15, col 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted.

As to claim 6, Wang and Ofek creates the acoustic signal packet transmitting method according to claim 5, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second communication apparatus includes both of the transmitting unit and the receiving unit the acoustic

signal packet transmitting method further comprising, in the transmitting unit of the first communication apparatus or the at least one second communication apparatus The paragraphs show communication devices being able to transmit and receive acoustic signals (Wang, fig 4, par 0054, 0069). The paragraph and figure shows determining a delay amount to a value smaller than or equal to the number of packets to be stored.

Wang fails to show setting the delay amount control information to a value smaller than or equal to the number of packets to be stored in the receiving unit in the same communication apparatus that includes the respective transmitting unit, the number of packets being determined at that receiving unit.

In an analogous art Ofek show setting the delay amount control information to a value smaller than or equal to the number of packets to be stored in the receiving unit in the same communication apparatus that includes the respective transmitting unit, the number of packets being determined at that receiving unit (Ofek, abstract, col 4, ln 49-52, col 11, ln 55-59, col 17, ln 1-6). The columns show the delay amount information is decreased smaller than the stored data packet.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang and Ofek because the amount of control information are contained in the same packet and transmitted

As to claim 7, Wang and Ofek explains the acoustic signal packet transmitting method according to claim 5, wherein the first communication apparatus including both of the transmitting unit and the receiving unit and the at least one second includes both of the transmitting unit and the receiving unit (Wang, par 0003, 0070); the acoustic signal packet transmitting method further comprising : in a respective transmitting unit; of the first communication apparatus or the at least one second communication apparatus containing in a packet the number of the packets to be stored in the receiving unit of the same communication apparatus that includes the respective transmitting unit, the number of packets being determined at that receiving unit, as information for specifying delay amount control information to be setting the transmitting unit at the other end of communication and transmitting the packet (Wang, par 0054). The paragraphs show communication devices being able to transmit and receive acoustic signals and specifying a delay amount to be transmitted to other mobile terminals. It is also shown where critical data of one or more stored frames can be stored in the receiver side, where packet loss is in the critical data.

As to claim 8, Wang displays the packet transmitting method according to claim 5, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second communication apparatus includes both of the transmitting unit and the receiving unit, the acoustic signal packet transmitting method further comprising: in a respective transmitting unit of the first communication

apparatus or the at least one second communication apparatus containing in a packet the number of packets stored in the receiving buffer that is measured in the receiving unit in the same communication apparatus that includes the respective transmitting unit, as information for requesting to set delay amount control information to be set in the transmitting unit at the other end of communication (Wang, par 0049, 0052, 0053, 0054, 0062, 0065, 0069, 0070). The paragraphs show determining the number of packets to be stored in a buffer and a receiving unit for setting a lag amount control information. It is also shown where critical data of one or more stored frames can be stored in the receiver side, where packet loss is in the critical data and where critical data is can transmitted in advance.

As to claim 9, claim 9 is a claim to a apparatus to carry out the apparatus of claim 1. Therefore claim 9 is rejected under the same rationale set forth in claim 1.

As to claim 10, Wang defines the acoustic signal packet receiving method according to claim 9, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second communication apparatuses includes and both of the transmitting unit and the receiving unit, the acoustic signal packet

receiving method comprises: in a respective receiving unit of the first communication apparatus or the at least one second communication apparatus(Wang, par 0003, 0004, 0008, 0070), both or one of a first determination step of determining a jitter state of a received packet and a second determination step of determining a lost state of a received packet (Wang, par 0003, 0004, 0008, 0070). The paragraphs show mobile terminals having a transmitter and receiving unit. The paragraphs show communication apparatuses in a packet network being able to receive acoustic signal for determining packet loss.

Wang disclose a step of determining the number of packets to be stored in a receiving buffer by using the result of the determination made at any of the determination steps; and the step of sending the number of packets to be stored in the receiving buffer to the transmitting unit in the same communication apparatus that includes the respective receiving unit. (Fig 4, 13, par 0022, 0054, 0062, 0065, 0070). The paragraphs show mobile terminals having a transmitter and receiving unit. The paragraphs show determining the number of packets to be stored in a buffer and a receiving unit for setting a lag amount control information, and the delay amount having value smaller than or equal to the number of packets to be stored. It is also shown where are feed back to the playback device of the mobile terminal.

As to claim 12, claim 12 is a claim to a apparatus to carry out the apparatus of claim 1. Therefore claim 12 is rejected under the same rationale set forth in claim 1.

As to claim 13, claim 13 is a claim to a apparatus to carry out the apparatus of claim 1. Therefore claim 13 is rejected under the same rationale set forth in claim 1.

As to claim 14, claim 14 is a claim to an apparatus to carry out the apparatus of claim 2. Therefore claim 14 is rejected under the same rationale set forth in claim 2.

As to claim 15, claim 15 is a claim to an apparatus to carry out the apparatus of claim 3. Therefore claim 15 is rejected under the same rationale set forth in claim 3.

As to claim 16, Wang and Ofek create the acoustic signal packet communicating apparatus according to claim 13, characterized in that: the receiving unit has means for measuring the number of packets stored in the receiving buffer which is as a remaining buffer amount (Wang, par 0049, 0054) and the transmitting unit has means for including the remaining buffer amount in the same packet that contains the frame acoustic signal as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication and transmitting the packet (Wang,

par 0023, 0049, 0054, 0055, 0065). Measuring the number of packets stored in the buffer and it is shown corresponding data for a frame number specified by a delay amount control information from the frame number of the packet. It is shown for concealing errors in data 110, 112 and 114 in a current AAC frame, it is preferred that corresponding data in at least one previous frame is stored in a buffer

As to claim 17, Wang disclose a computer readable storage medium which stores an acoustic signal packet communicating program for causing a computer to perform the steps of the acoustic signal packet communicating method according to claim 1 (par 0002, 0003). The paragraphs show using digital audio streaming applications.

As to claim 18, Wang provide a computer readable storage medium which stores an acoustic signal packet transmitting program for causing a computer to perform the steps of the acoustic signal packet transmitting method according to claim 5 (par 0002, 0003). The paragraphs show using digital audio streaming applications.

As to claim 19, Wang expose a computer readable storage medium which stores an acoustic signal packet receiving program for causing a computer to perform the steps of the acoustic signal packet receiving method according to claim 9 (par 0002, 0003). The

paragraphs show using digital audio streaming applications.

Claim Rejections - 35 USC § 103

4. Claim 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (U.S. 2004/0128128), Ofek (U.S. 6,038,230) in view of Jalali et al. (2003/0002450).

As to claim 11, Wang and Ofek conveys the acoustic signal packet receiving method according to claim 9, wherein the first communication apparatus includes both of the transmitting unit and the receiving unit and the at least one second apparatuses includes both of the transmitting unit and the receiving unit (par 0003, 0070), the acoustic signal packet receiving method further comprising the steps of: in a respective receiving unit of the first communication apparatus or the at least one second communication apparatus, measuring the number of packets stored in the receiving buffer as a remaining buffer amount (Wang, par 0054) and sending the remaining buffer amount (par 0051, 0070). The paragraphs show a communication apparatus having a transmitting and receiving unit, and one more of this same apparatus.

Measuring the number of packets stored in the buffer is shown and the apparatus having the ability to switch to the transmitting unit to send the data is shown also.

Wang and Ofek fails to show sending data amount to the transmitting unit in the same communication apparatus that includes the respective receiving unit.

In an analogous art Jalali show sending data amount to the transmitting unit in the same communication apparatus that includes the respective receiving unit (Jalali par 0070, pg 11, claim 2). The paragraph and page shows data being received from the receiving unit to the transmitter unit.

At the time of the invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Wang, Ofek and Jalali because the data would be readily available to the terminal at all times.

Response to Arguments

1) Applicants submit that Wang fails to disclose or suggest all of the features of Claim 1. Applicants emphasize that these features of the error concealment disclosed in these specified paragraphs are implemented in a receiving side, but not to a transmitting side. Thus, Applicants submit that the cited paragraphs of

Wang noted above, fail to disclose or suggest "in the transmitting unit, including, in a same packet, a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames, and acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in the packet and transmitting the packet," as required by amended Claim 1.

2) Applicants note that Wang does describe a transmitting side in paragraphs [0051] to [0053], the latter one of which particularly describes about embedding critical data in multiple packets to be transmitted. However, these paragraphs do not disclose or suggest "in the transmitting unit, including, in a same packet, a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames, and acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in the packet and transmitting the packet," as required by amended Claim 1.

3) However, none of these paragraphs as well as paragraphs [0054], [0065] describes anything about "in the transmitting unit, including, in a same packet, a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames, and acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by

the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in the packet and transmitting the packet," as required by amended Claim 1.

4) Therefore, Wang's lag value has nothing to do with "the delay amount control information" recited in Claim 1.

5) Thus, while paragraph [0053] of Wang describes embedding critical data in plural packets and transmitting the packets, it still does not disclose or suggest anything about "in the transmitting unit, including, in a same packet, a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames, and acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in the packet and transmitting the packet," as required by amended Claim 1.

6) Therefore, Applicants submit that for all the reasons discussed above, Claim 1 (and all associated dependent claims) patentably distinguishes over Wang. Independent Claims 5, 9, 12 and 13 recite features similar to those of Claim 1 discussed above. Therefore, Applicants submit that Claims 5, 9, 12, and 13 (and all associated dependent claims) patentably distinguish over Wang.

Examiner agrees but in an analogous art Ofek shows the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet (Ofek, fig 15, col 14, ln 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames. The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. Please review MPEP 2144 (I.).

7) Applicant argues however, these portions of Wang do not disclose or suggest anything about "in the transmitting unit, including, in a same packet, the frame acoustic signal, delay amount control information that has a value that indicates a difference between two frame numbers, and acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the

value specified by the delay amount control information from the frame number of the frame acoustic signal contained in the packet and transmitting the packet," as required by Claim 5.Therefore, Applicant submit that independent Claim 5 (and all associated dependent claims) patentably distinguishes over Wang for the additional above-noted reasons.

Examiner agrees but in an analogous art Ofek shows the acoustic signal packet communicating method further comprising the steps of: in the transmitting unit, including, in the same packet that contains a frame acoustic signal, delay amount control information that has a value that indicates a difference between two frames. acoustic signal corresponding data corresponding to a frame acoustic signal having a frame number different by the value specified by the delay amount control information from the frame number of the frame acoustic signal contained in packet and transmitting the packet (Ofek, fig 15, col 14, ln 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames. The rationale to modify or combine the prior art does not have to be expressly stated in the prior art; the rationale may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. Please review MPEP 2144 (I.).

8) Applicant argues however, while Wang describes determining packet loss in the receiving unit in a communication apparatus as a necessary function, there is no still no description of determining a jitter state of received packets in addition to a packet loss state, and determining the number of packets to be stored in a receiving buffer at the receiving side based on determination result of jitter state and/or loss state. Wang also does not describe anything about setting, at the transmitting unit in the same communication apparatus, the delay amount control information to a value smaller than or equal to a target value of the number of stored packets.

Therefore, Applicants submit that Wang fails to disclose or suggest "both or one of a first determining step of determining a jitter state of a received packet and a second determining step of determining a loss state of a received packet; and the step of using the result of the determination made in any of the determining steps to determine the number of packets to be stored in the receiving buffer as a targeted value of the number of stored packets," and "in the transmitting unit in the same communication apparatus that includes the respective receiving unit, the step of setting the delay amount control information to a value smaller than or equal to the targeted value of the number of the stored packets," as required by Claim 2. Therefore, Applicants respectfully submit that dependent Claim 2 (and similarly, Claim 14) patentably distinguishes over Wang for at least the foregoing reasons.

Examiner respectfully disagrees the claim states both or one of a first determining step of determining a jitter state of a received packet and a second determining step of determining a loss state of a received packet. The claim gives the option of determining a jitter or determining a loss state of a received packet. In (Wang, par 0003, 0004, 0068), states recent developments in the audio signal compression field have rendered streaming digital audio using mobile terminals possible. With the increase in network traffic, a loss of audio packets due to traffic congestion or excessive delay in the packet network is likely to occur. Moreover, the wireless channel is another source of errors that can also lead to packet losses. Under such conditions, it is crucial to improve the quality of service (QoS) in order to induce widespread acceptance of music streaming applications. [0004] to mitigate the degradation of sound quality due to packet loss, various prior art techniques and their combinations have been proposed. UEP (unequal error protection), a subclass of forward error correction (FEC), is one of the important concepts in this regard. UEP has been proven to be a very effective tool for protecting compressed domain audio bit streams, such as MPEG AAC (Advanced Audio Coding), where bits are divided into different classes according to their bit error sensitivities. Also in (par 0068),At the same time, information 204 indicative of a packet sequence number is provided to an error checking module 24 in order to check whether a packet is missing. If so, the error checking module 24 informs a bad frame indicator 28 of the loss packet.

The paragraph show determining a packet lost in an analogous art Ofek show in the transmitting unit in the same communication apparatus that includes the receiving unit, a step of setting the delay amount control information to a value smaller than or equal to the targeted value of the number of the stored packets (Ofek, fig 15, col 14, 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

9) Applicant argues however, does not disclose anything about determining, at the receiving unit, a target value of number of packets to be stored in a receiving buffer and containing, at the transmitting unit, the target value as delay amount control information in a packet together with the frame acoustic signal and acoustic signal corresponding data to be transmitted. Therefore, Applicants submit that Claim 3 (and similarly, Claim 15) patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees in (Wang par 0068, 0069), "the receiver side, which is capable of carrying out error concealment in the compressed domain, according to the present invention, as well as error concealment in the MDCT domain. Furthermore, it is

capable of concealing errors in percussive sounds in the PCM domain, as discussed in copending U.S. patent application Ser. No. 10/281,395. As shown in FIG. 12, at the receiver side 5, a packet unpacking module 20 is used to convert the packet data 200 into an AAC bit stream 210. Information 202 indicative of a codebook is provided to a percussive codebook buffer 22 for storage. At the same time, information 204 indicative of a packet sequence number is provided to an error checking module 24 in order to check whether a packet is missing. If so, the error checking module 24 informs a bad frame indicator 28 of the loss packet. The receiver 5, as described above, also includes error concealment modules and buffers to reconstruct the corrupted or missing percussive sounds in an audio bit stream". The paragraphs show receiving unit, a target value of number of packets to be stored in a receiving buffer. In an analogous art Ofek show the step of containing the targeted value of the number of stored packets sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication (Ofek, fig 15, col 1, ln 33-38, col 14 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

10) Applicant argues however, the cited portions of Wang do not disclose or suggest anything about measuring, at the receiving unit in a communication apparatus, the number of packets remained in a receiving buffer and containing, at the transmitting unit in the same communication apparatus, the number of remaining packets in a packet as delay amount control information. Therefore, Applicants submit that Claim 4 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees in (Wang par 0068, 0069), "the receiver side, which is capable of carrying out error concealment in the compressed domain, according to the present invention, as well as error concealment in the MDCT domain. Furthermore, it is capable of concealing errors in percussive sounds in the PCM domain, as discussed in copending U.S. patent application Ser. No. 10/281,395. As shown in FIG. 12, at the receiver side 5, a packet unpacking module 20 is used to convert the packet data 200 into an AAC bit stream 210. Information 202 indicative of a codebook is provided to a percussive codebook buffer 22 for storage. At the same time, information 204 indicative of a packet sequence number is provided to an error checking module 24 in order to check whether a packet is missing. If so, the error checking module 24 informs a bad frame indicator 28 of the loss packet. The receiver 5, as described above, also includes error concealment modules and buffers to reconstruct the corrupted or missing percussive sounds in an audio bit stream". The paragraphs show receiving unit, a target

value of number of packets to be stored in a receiving buffer. In an analogous art Ofek show the step of containing the remaining buffer amount sent from the receiving unit in a packet as information for specifying delay amount control information to be set in the transmitting unit at the other end of communication and transmitting the packet (Ofek, fig 15, col 1, ln 33-38, col 14 25-29, col14, ln 36-58, col 16, ln 56-63, col 18, ln 54-60). The columns show the controller forward data which is shown to include audio information, and a delay amount control information that has a value that indicates a difference between two frames.

11) Applicant argues however, Applicants submit that these cited portions of Wang do not disclose or suggest anything about setting the delay amount control information to a value smaller than or equal to the number of packets to be stored in the receiving unit. Therefore, Applicants submit that Claim 6 patentably distinguishes over Wang, for at least the foregoing reasons. Regarding Claim 4, the Office Action cites to previously discussed paragraphs [0003], [0004], [0070], [0054] of Wan~. However, Applicants submit that these cited portions of Wang do not disclose or suggest anything about setting the delay amount control information to a value smaller than or equal to the number of packets to be stored in the receiving unit. Therefore, Applicants submit that Claim 6 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner disagrees but in analogous art Ofek show setting the delay amount control information to a value smaller than or equal to the number of packets to be stored in the receiving unit in the same communication apparatus that includes the respective transmitting unit, the number of packets being determined at that receiving unit (Ofek, abstract, col 4, ln 49-52, col 11, ln 55-59, col 17, ln 1-6). The columns show the delay amount information is decreased smaller than the stored data packet.

12) Applicant argues however, Applicants submit that these cited portions do not disclose or suggest anything about containing in a packet the number of packets stored at the receiving unit as information specifying delay amount to be set at a transmitting unit of another communication apparatus. Therefore, Applicants submit that Claim 7 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees in (Wang, par 0003, 0070, 0054). The paragraphs show communication devices being able to transmit and receive acoustic signals and specifying a delay amount to be transmitted to other mobile terminals. It is also shown

where critical data of one or more stored frames can be stored in the receiver side, where packet loss is in the critical data.

13) Applicant argues however, Applicants submit that these cited portions do not disclose or suggest anything about containing, in a packet, the number of packets stored in the receiving buffer as information for requesting to be set at a transmitting unit of another communication apparatus. Therefore, Applicants submit that Claim 8 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees Wang shows (Wang, par 0049, 0052, 0053, 0054, 0062, 0065, 0069, 0070), the paragraphs show determining the number of packets to be stored in a buffer and a receiving unit for setting a lag amount control information. It is also shown where critical data of one or more stored frames can be stored in the receiver side, where packet loss is in the critical data and where critical data is can transmitted in advance.

14) Applicant argues Regarding Claim 10, the Office Action cites to previously discussed paragraphs [0022], [0054], [0062], [0065], [0070] of Wang. However,

Applicants submit that these cited portions do not disclose or suggest anything about determining the number of packets to be stored in a receiving buffer and providing the number to the transmitting unit in the same communication apparatus. Therefore, Applicants submit that Claim 10 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees the claims states a method for receiving a signal having at two apparatus having a receiving and transmitter unit or a method of a determining step. In (Wang, par 0003, 0004, 0008, 0070), the paragraphs show mobile terminals having a transmitter and receiving unit able to receive acoustic signal packet.

15) Applicant argues however, applicants submit that these cited portions do not disclose or suggest anything about counting the number of packets remaining in the receiving buffer and providing the number to the transmitting unit in the same communication apparatus. Therefore, Applicants submit that Claim 11 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees the claim does not state counting the number of packets. In (Wang par 0054, 0069), it shows in the receiver buffer with any one of these methods, the critical data of one or more frames can be stored in the receiver side. In

case the packet loss is in the critical data, at least part of the critical data can be derived from neighboring frames based on their statistical characteristics and data structures. In an analogous art Jalali show sending data amount to the transmitting unit in the same communication apparatus that includes the respective receiving unit (Jalali par 0070, pg 11, claim 2). The paragraph and page shows data being received from the receiving unit to the transmitter unit.

16) Applicant argues however, does not disclose or suggest measuring the number of packets remaining in the receiving buffer (i.e., remaining buffer amount) and transmitting the remaining buffer amount as delay amount control information in the same packet that contains frame acoustic signal. Therefore, Applicants submit that Claim 16 patentably distinguishes over Wang, for at least the foregoing reasons.

Examiner respectfully disagrees in (Wang, par 0023, 0049, 0054, 0055, 0065), measuring the number of packets stored in the buffer and it is shown corresponding data for a frame number specified by a delay amount control information from the frame number of the packet. It is shown for concealing errors in data 110, 112 and 114 in a current AAC frame, it is preferred that corresponding data in at least one previous frame is stored in a buffer

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Harley whose telephone number is (571)270-5435. The examiner can normally be reached on Monday- Friday 7:00 am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571)272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)? If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JH
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